

We Claim:

1. A method for characterizing an individual as possessing a factor contributing to an increased tendency for responding to an antigen with a Th1 or Th2 response; wherein said method comprises:
  - (a) determining the genotype of said individual with respect to the nucleotide present at position 883 of the TCF-1 gene, wherein said gene sequence is provided as SEQ ID NO: 1;
  - (b) classifying said patient based on the result obtained from step (a), wherein the presence of an A allele indicates a factor contributing to an increased tendency for responding to an antigen with a Th1 response, and the presence of a C allele indicates a factor contributing to an increased tendency for responding to an antigen with a Th2 response.
- 15 2. A method for characterizing an individual as possessing a factor contributing to an increased risk of a Th1-mediated disease or an increased risk of a Th2-mediated disease, wherein said method comprises:
  - (a) determining the genotype of said individual with respect to the nucleotide present at position 883 of the TCF-1 gene, wherein said gene sequence is provided as SEQ ID NO: 1;
  - (b) classifying said patient based on the result obtained from step (a), wherein the presence of an A allele indicates a factor contributing to an increased risk of a Th1-mediated disease, and the presence of a C allele indicates a factor contributing an increased risk of a Th2-mediated disease.
- 25 3. A method for characterizing an individual as possessing a factor contributing to an increased risk of a Th1-mediated disease, wherein said method comprises:
  - (a) determining the genotype of said individual with respect to the nucleotide present at position 883 of the TCF-1 gene, wherein said gene sequence is provided as SEQ ID NO: 1;

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(b) classifying said patient based on the result obtained from step (a), wherein the presence of an A allele indicates a factor contributing to an increased risk of a Th1-mediated disease.

5 4. A method of claim 3, wherein said Th1-mediated disease is type 1 diabetes or multiple sclerosis.

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10 5. A method for characterizing an individual as possessing a factor contributing to an increased risk of a Th2-mediated disease, wherein said method comprises:

(a) determining the genotype of said individual with respect to the nucleotide present at position 883 of the TCF-1 gene, wherein said gene sequence is provided as SEQ ID NO: 1;

15 (b) classifying said patient based on the result obtained from step (a), wherein the presence of a C allele indicates a factor contributing to an increased risk of a Th2-mediated disease.

6. A method of claim 5, wherein said Th2-mediated disease is allergic asthma or atopy.

20 7. A method for determining the genotype of a sample with respect to the nucleotide present in the TCF-1 gene at position 883, comprising:

(a) contacting nucleic acid from said sample with an oligonucleotide probe exactly complementary to an allele that is an A allele or a C allele in a region

25 encompassing position 883 under conditions such that hybridization occurs if and only if said allele is present; and

(b) detecting if hybridization occurs, which indicates the presence of said allele.

30 8. A method of Claim 7, wherein a segment of region of said nucleic acid encompassing said region is amplified prior to, or concurrent with step (a).

9. A method of Claim 8, wherein said probe is selected from the group consisting of KW196 (SEQ ID NO: 8) or KW118 (SEQ ID NO: 9).

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10. A method for determining the genotype of a sample with respect to the nucleotide present in the TCF-1 gene at position 883, comprising:

(a) contacting nucleic acid from said sample with a set of oligonucleotide primers comprising an allele-specific primer specific for an allele that is an A allele or a C allele under amplification conditions such that amplification occurs using said allele-specific primer if and only if said allele is present; and

10 (b) detecting if amplification occurs, which indicates the presence of said allele.

11. A method of Claim 10, wherein said allele specific primer is GZ351B  
15 (SEQ ID NO: 4) or GZ374B (SEQ ID NO: 5).

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12. An isolated oligonucleotide, wherein said oligonucleotide is exactly or substantially complementary to either strand of SEQ ID NO: 1 in a region which encompasses the polymorphic site at nucleotide position 883, and wherein said  
20 oligonucleotide is exactly complementary to SEQ ID NO: 1 at said nucleotide position 883.

13. An isolated oligonucleotide of Claim 12, wherein said region is about 10 to about 35 nucleotides in length.

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14. An isolated oligonucleotide of Claim 13 selected from the group consisting of GZ351B (SEQ ID NO: 4), GZ374B (SEQ ID NO: 5), KW196 (SEQ ID NO: 8), KW118 (SEQ ID NO: 9), and the exact complements thereof.

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15. A kit for determining the genotype of an individual TCF-1 genotype with respect to the nucleotide present in the TCF-1 gene at position 883 locus comprising an oligonucleotide of Claim 12.

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16. A kit for determining the genotype of an individual TCF-1 genotype with respect to the nucleotide present in the TCF-1 gene at position 883 locus comprising an oligonucleotide of Claim 13.

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17. A kit for determining the genotype of an individual TCF-1 genotype with respect to the nucleotide present in the TCF-1 gene at position 883 locus comprising an oligonucleotide of Claim 14.

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